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3,154,830

## EMBOSSED ROLLER DEVICE FOR SIMULATING NATURAL STONES

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Filed Feb. 18, 1963, Ser. No. 259,132

5 Claims. (Cl. 25-1)

This invention relates to structural surfacing and more particularly to such surfacing having the appearance of stone.

The present invention finds ready application to structural units such as cinder blocks or bricks, the formation of simulated stone surfacing thereon and a tool for forming such simulated stone surface.

In the construction of residences and commercial establishments, it is often desired to avoid using common place wood and brick for exterior surfaces and in place thereof use stone. However, stone is very expensive material which is heavy and which must be cut, crated and shipped to the construction site. In an effort to avoid the expense of natural stone many substitutes have been offered to the construction trades. Many of these substitutes only appear to simulate natural stone from a distance, but when observed from close range the surface lacks depth. Improved simulated stone surfaces having a dimension in depth have been introduced but they must be formed on the supporting walls requiring the contractor to do tedious work on vertical walls sometimes at heights at which such work becomes very difficult and dangerous. Other such simulated stone surfaces may be formed from structural units having a surface applied thereto at the manufacturing plant by expensive machinery and requiring careful handling and packaging for delivery from the manufacturing plant to the construction site.

It is an object of this invention is to provide a novel tool for forming simulated stone surfaces on structural units.

Still another object is to provide a novel portable surface forming tool simple in construction and easy to assemble.

Yet another object is to provide a novel portable surface forming tool which is adjustable to provide a plurality of surfaces from a single set of components.

The present invention contemplates a roller having an irregular surface formed thereon and adapted to be mounted between spaced areas of a yoke-shaped support. The roller is passed over an aggregate applied to the surface of a structural unit to apply formations thereon simulating that of stone. Adjustment means may be provided to vary the appearance of the formations produced by a single roller thereby increasing the utility thereof.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a perspective view of a structural unit having a simulated stone surface applied thereto in accordance with the present invention.

FIG. 2 is a view in partial section of a tool for forming the simulated stone surface on the structural unit of FIG. 1.

FIG. 3 is a structural view taken along lines 3-3 of FIG. 2.

FIG. 4 is a view in partial section of a modified form of the tool shown in FIG. 2.

FIG. 5 is a plan view of an end bell used in the modified tool of FIG. 4.

FIG. 6 is a plan view of yet another form of end bell

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adapted for use on the forming tools of either FIG. 2 or FIG. 4.

A structural unit, such as a cinder block or brick, generally indicated by the numeral 11 (FIG. 1) has applied to a surface thereof an aggregate 13 such as concrete, mortar, plastic material or the like. When said aggregate has partially hardened it assumes a state wherein it is easily formable and any indentations, grooves, depressions or other changes in the surface thereof will remain as formed until aggregate 13 solidifies. When properly formed the surface of aggregate 13 and thereby structural unit 11 will simulate that of stone. Cores 15 are formed in structural unit 11 to lighten the weight thereof.

To facilitate the application of the simulated stone facing to structural unit 11 a forming tool 21 (FIG. 2) is utilized. A pair of spaced arms 23, formed from tubular steel or the like, are arranged in a substantially Y-shaped configuration terminating in an externally threaded shank 25. An internally threaded handle 27 is threaded onto shank 25 thus allowing for a firm grip on forming tool 21.

An irregularly surfaced roller 31 (FIGS. 2 and 3) is mounted between a pair of end bells 33 (FIGS. 2 and 3) each rotatively carried by an arm 23. An externally threaded securing member 35 such as a bolt or the like is passed through an aperture 37 formed in end bell 33 and an aperture 39 formed in arm 23 and then an internally threaded member 41 is threaded onto externally threaded member 35 to rotatively secure same in place as shown in FIG. 2. An annular-shaped washer 45 is mounted on each member 35 between end bell 33 and arm 23 to provide proper spacing of the elements.

Roller 31 is manufactured of steel or other formable rigid material having good wear properties. The irregular outer cylindrical surface thereof is provided with smooth flowing depressions and rises in such manner as to allow roller 31 to be easily and speedily moved over the aggregate to form the simulated stone surface thereon.

End bell 33 is manufactured from hard rubber or the like with a ridge 51 (FIG. 2) formed thereon to accommodate a lip 53 formed on roller 31. A recess 55 (FIGS. 2 and 3) is formed in the inner surface of end bell 33. A relatively thin flat annular ring 57 (FIGS. 2 and 3) is fitted around ridge 51 of end bell 33 to prevent wear on the inner surface of end bells 33.

To assemble forming tool 31 externally threaded members 35 are passed through aperture 37 of end bell 33, washers 45, apertures 39 of arms 23 and then internally threaded members 41 are threaded onto externally threaded members 35 to secure end bells 33 to arm 23. With rings 57 in place roller 31 is first set onto one end bell by seating lip 53 of roller 31 on ridge 51 of end bell 31. The inherent resilience of arms 23 allows for a slight spacing thereof sufficient to position the other end of roller 31 such that its lip 53 will seat on the other end bell 33. When roller 31 is properly disposed between end bells 33 the resilience of arms 23 will bias end bells 33 toward each other to prevent inadvertent extraction of roller 31 therefrom.

When it is desired to form a simulated stone surface on a structural unit 11 an aggregate of proper composition is applied to a surface thereof. When the aggregate has partially hardened forming tool 21 is disposed with the surface of roller 31 in contact with the aggregate and if desired with rings 57 in contact with the edges of the structural unit. Forming tool 21 is then drawn across structural unit 11. The irregular surface of roller 31 will form contours in the surface of the aggregate which, when the aggregate completely hardens, will give structural unit 11 the appearance of stone.